WECC Low Voltage Ride Through Standard

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Low Voltage Ride Through Standard

- Would require generation sources to remain connected to the grid during reasonable voltage excursions
- Primarily a concern with wind turbines
- WECC began developing standard in the fall of 2003
- Approved by the WECC Board in April 2005

WECC Standard

- A generating plant must:
  - Have LVRT capability down to 15 percent of the rated line voltage for the duration of the fault
  - Be able to remain in operation during the voltage swings specified in the WECC Disturbance Performance Table (i.e., a 30% transient voltage dip)
- Voltage to be measured at the high voltage side of the transformer at the generator interconnection point.
- Standard applies to generators connecting after March 1, 2006

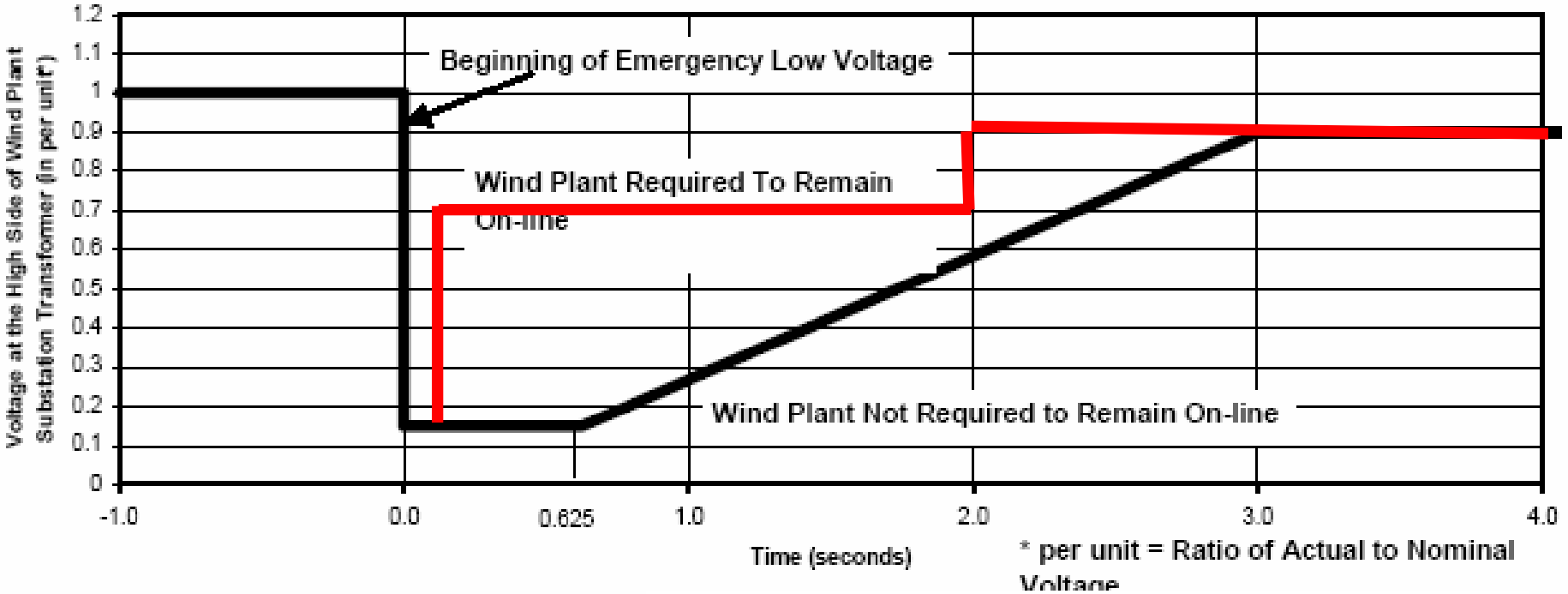
FERC Actions on LVRT

- In a January 24, 2005 NOPR, FERC Proposed a LVRT Standard
  - Will become Appendix G of the Large Generator Interconnection Policy (LGIP)
- More Stringent than WECC's Proposed LVRT Standard

FERC's Proposed Standard

- A wind generating plant must:
  - Have LVRT capability down to 15 percent of the rated line voltage for 0.625 seconds
  - Be able to operate continuously at 90 percent of the rated line voltage
- Voltage to be measured at the high voltage side of the wind plant substation transformer.

FERC Proposed Minimum Required Wind Plant Response to Emergency Low Voltage



WECC Standard

CALIFORNIA ISO

Differences Between WECC and FERC Standards

- WECC's standard would apply to more units (10 MW and greater versus 20 MW and greater)
- WECC's standard applies to all generation and FERC's only applies to wind generation.
  - For non-wind generation, a stricter standard may be appropriate


Questions?